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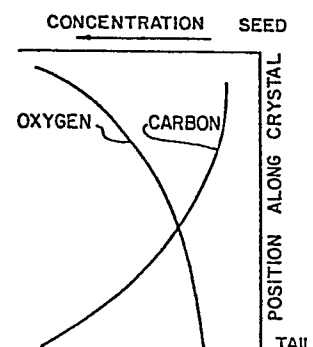
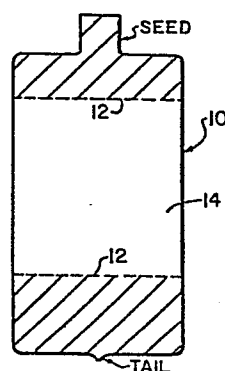
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54 **Silicon wafer and its application in producing integrated circuit devices.**

57 The semiconductor silicon wafer contains a small amount of oxygen and has a carbon concentration of greater than about 4 ppm.

Wafers of said kind are provided by slicing the tail part of a melt-grown silicon crystal into wafers and subsequently selecting from the produced wafers those having a carbon concentration of greater than 4 ppm. These wafers are applied for producing integrated circuit devices by means of essentially known manufacturing procedures. The formed integrated circuit devices have a low device-leakage current.





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EUROPEAN SEARCH REPORT

0137209

Application number

EP 84 10 9528

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	JOURNAL OF CRYSTAL GROWTH, vol. 49, no. 1, May 1980, pages 53-60, North Holland Publishing Co., Amsterdam, NL; E. KURODA et al.: "Inhomogeneity in silicon single crystal ingots grown from metallurgical grade silicon" * Page 57, paragraph 3.3, table 2 *	1-3	C 30 B 15/00 C 30 B 29/06 C 30 B 15/04
A	--- JAPANESE JOURNAL OF APPLIED PHYSICS, vol. 19, no. 2, February 1980, pages L101-L104; Y. MATSUSHITA et al.: "A study on thermally induced microdefects in Czochralski-grown silicon crystals: dependence on annealing temperature and starting materials" * Page L102, table I *	4-7	
X,D	--- IBM TECHNICAL DISCLOSURE BULLETIN, vol. 18, no. 2, July 1975, page 336, New York, US; V. SHARMA: "Semiconductor silicon substrate for high yield" --- -/-	1-7	TECHNICAL FIELDS SEARCHED (Int. Cl.4) C 30 B 15/00 C 30 B 29/06 C 30 B 15/04 C 30 B 13/00 C 30 B 13/10 C 30 B 15/30
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27-04-1987	Examiner FLINK
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			



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A	IBM TECHNICAL DISCLOSURE BULLETIN, vol. 25, no. 3A, August 1982, pages 962-963, New York, US; D.C. AHLGREN et al.: "Increasing carbon content in Czochralski grown crystals"	1-9	
A	IBM TECHNICAL DISCLOSURE BULLETIN, vol. 21, no. 3, August 1978, page 1025, New York, US; L.O. CLARK et al.: "Optimum oxygen content of wafers"	4-9	
A	JAPANESE JOURNAL OF APPLIED PHYSICS, vol. 19, no. 1, January 1980, pages L33-L36, Tokyo, JP; K. HOSHIKAWA et al.: "Low oxygen content Czochralski silicon crystal growth" * Page L33, paragraph 1 *	4,5,8,10	
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